

**REMARKS**

Entry of this amendment prior to examination on the merits is respectfully requested. The Advisory Action dated April 7, 2005 has been carefully considered. Claims 17-18, 20-38 and 47 are pending. The above amendments and following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claims 17 and 21 have been amended, and Claim 47 has been added in this Reply. Claims 1-16, 19 and 39-46 have been cancelled in this Reply. Reconsideration and allowance are respectfully requested in light of the above amendments and following remarks.

Claims 17-21 stand rejected under 35 U.S.C. § 102(e) in view of U.S. Patent 6,597,249 to Chien (“Chien”). Insofar as these rejections may be applied against the amended claims, they are deemed overcome. Claim 19 has been cancelled in this Response. Accordingly, Applicants submit that the rejection of Claim 19 is moot.

Claim 17 has been amended to include a distinguishing feature of the present invention. The system of Claim 17 “measures *a minimum and a maximum output frequency* of the VCO...; and determines the lock and capture range of the PLL based on the measured *minimum and maximum* frequencies.” Support for this amendment can be found, among other places, page 7, line 25, through page 8, line 11, of the original Application.

The Chien reference does not suggest, teach, or disclose measuring a minimum and maximum frequency of the VCO to determine a lock and capture range of a phase lock loop (“PLL”). Specifically, Chien discloses the fine tuning of the VCO by matching the PLL’s frequency to a finite reference frequency. In contrast with the Chien reference, the present invention applies a number of test voltages to the VCO to determine a minimum and a maximum output frequency of the VCO. This process does not involve fine tuning the VCO, but determining

its lock and capture range by applying test voltages and measuring output frequencies. This method enables the frequency output specifics of the VCO to be determined through a set of tests. This feature of the present invention is not disclosed in the Chien reference.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach, or suggest the unique combination recited in Claim 17. Applicants therefore submit that Claim 17 is both clearly and precisely distinguishable over the cited reference in a patentable sense. Accordingly, Applicants respectfully request that the rejection of Claim 17 under 35 U.S.C. § 102(e) in view of Chien be withdrawn and that Claim 17 be allowed.

Claims 18 and 20 depend upon and further limit Claim 17. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejections of dependent Claims 18 and 20 also be withdrawn.

Claim 21 has been amended to include a distinguishing feature of the present invention. The apparatus of Claim 21 contains “*a frequency measuring module for measuring a minimum and a maximum VCO output frequency...; and means for determining lock and capture range of the PLL based upon the measured minimum and maximum VCO output frequencies.*” Support for this amendment can be found, among other places, page 7, line 25, through page 8, line 11, of the original Application. For at least the aforementioned reasons that amended Claim 17 should be deemed to be in condition for allowance, this Claim should also be deemed to be in condition for allowance. Specifically, the Chien reference does not suggest, teach, or disclose applying test input voltages to measure a minimum and maximum frequency of the VCO and determine a lock and capture range of a PLL.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach, or suggest the unique combination recited in Claim 21. Applicants therefore submit that Claim 21 is both clearly and precisely distinguishable over the cited reference in a patentable sense. Accordingly, Applicants respectfully request that the rejection of Claim 21 under 35 U.S.C. § 102(e) in view of Chien be withdrawn and that Claim 21 be allowed.

Claims 22-24, 29-32 and 37 stand rejected under 35 U.S.C. § 103(a) in view of Chien, and U.S. Publication 2003/0071748 to Huang (“Huang”). Insofar as these rejections may be applied against the amended claims, they are deemed overcome. Claims 22-24, 29-32, and 37 depend upon and further limit Claim 21. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejections of dependent Claims 22-24, 29-32, and 37 also be withdrawn.

Claims 25-28 and 33-36 stand rejected under 35 U.S.C. § 103(a) in view of Chien, Huang, and U.S. Patent 6,492,798 to Sunter (“Sunter”). Insofar as these rejections may be applied against the amended claims, they are deemed overcome. Claims 25-28 and 33-36 depend upon and further limit Claim 21. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejections of dependent Claims 25-28 and 33-36 also be withdrawn.

Claim 38 stands rejected under 35 U.S.C. § 103(a) in view of Chien, Huang, and U.S. Patent 4,851,712 to Imai (“Imai”). Insofar as this rejection may be applied against the amended claims, it is deemed overcome. Claim 38 depends upon and further limits Claim 21. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claim 38 also be withdrawn.

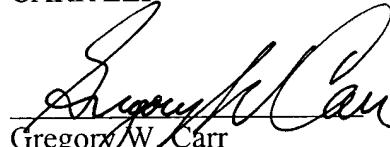
Claim 47 is a new claim. Applicants submit that the limitations of Claim 47 are supported by the original Application, and more specifically FIG. 12. Applicants have now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of Claims 17-18, 20-38 and 47.

Applicants enclose a check in the amount of \$790.00 in payment of the fee required under 37 CFR 1.17(e) for a Request for Continued Examination under 37 CFR 1.114. Applicants do not believe that any other fees are due; however, in the event that any other fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

CARR LLP

  
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